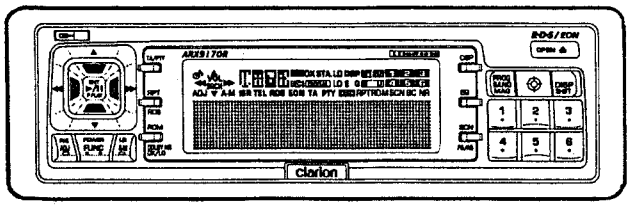
Clarion Co., Ltd. Export Division–22-3, Shibuya 2-chome, Shibuya-ku, Tokyo, 150 Japan Tel: 03-3400-1121 Fax: 03-3400-8679 Telex: J22908, J22152
Service Dept.–35-2, Hakusan 5-chome, Bunkyo-ku, Tokyo, 112 Japan Tel: 03-3813-5151 Fax: 03-3814-2550

clarion Service Manual

Published by Service Dept.



RDS–EON/FM · MPX/MW/LW RADIO CASSETTE COMBINATION WITH DSP/EQ/CD CHANGER CONTROL

Model ***ARX9170R***

(PE-9902E)

■SPECIFICATIONS:

Radio section

Frequency Range : LW 153kHz to 279kHz
MW 531kHz to 1,602kHz
FM 87.5MHz to 108.0MHz

Tape deck Section

Reproduction system : Auto reversing
4 track,2 channel stereo
cassette tape playback
(Monaural also capable)
Tape speed : 4.76cm/sec.(1-7/8ips)

General Section

Load impedance : 10kΩ×4 (Line out)
10kΩ×2 (Non fader out)
Power Supply Voltage : 14.4V(10.8V to 15.6V allowable), negative ground
Current Consumption : Less than 3A
Dimensions : 178(W)×50(H)×152(D)mm
Weight : 1.6kg

●Dolby noise reduction is manufactured under license from Dolby Laboratories Licensing Corporation.
●"DOLBY" and the double-D symbol ⅅ are trademarks of Dolby Laboratories Licensing Corporation.

Specifications and design are subject to change without notice for further improvement.

■COMPONENTS:

●PE-9902E-A

Main unit		1
Remote controller	RCB-058-300	1
Battery(CR2058BC)	————	1
Sticker	291-0062-00	1
Mounting bracket (univ.)	300-9035-01	1
DCP case	335-4848-03	1
Extension lead	854-3843-00	1
Parts bag	————	1
Hook plate	330-8216-01	(2)
Lead holder	335-0833-01	(1)
Spacer	345-3653-01	(1)
Screw	716-0726-01	(1)

 Printed in Japan 298-5213-00 JAN. 1995 Ⓜ

■ EXPLANATION OF ICs

■ μPD78058GC-025-3B9 052-3318-00 System Controller μPD78058GC-044-3B9 052-3316-01 (Master Microcomputer)

* 052-3318-00 and 052-3316-01 are not compatible with each other.

Outward Form

80-pin plastic QFP

Terminal Description (052-3318-00)

No.	Symbol	I/O	Function
1 ~ 3	GND	–	GND terminal.
4 ~ 6	AV_{SS}	–	GND terminal for A/D.
7	AVref 1	–	A/D reference voltage terminal (+5V).
8 9 10	SI 2 SO 2 SCK 2	–	Connected to GND.
11 12	DISP SI DISP SO	I O	Terminal to input and output data of serial bus line.
13 14 15	DISP SCK DISP RESET DISP BUSY	O O I	Terminal to input and output signal to DCP microcomputer.
16 17 18	C-BUS SI C-BUS SO C-BUS SCK	I O O	C-BUS line SI/SO/SCK terminal on master side.
19 ~ 26 27 ~ 29	AD 0 ~ AD7 A 8 ~ A 10	I/O O	Address/data bus for SRAM interface.
30	NC	–	Not in use.
31	SRQ	I	C-BUS line SRQ terminal on master side.
32	ACC CONT	O	ACC controlling terminal of serial bus line.
33	V_{SS}	–	GND terminal.
34	ILLUMI 1	O	"H" is outputted in the case of AMBER.
35	IJJUMI 2	O	"H" is outputted in the case of GREEN.
36	ACC REM	O	Terminal to control ON/OFF of 5V system power supply (ACC 5V).
37	REM + B	O	Terminal to control ON/OFF of + B (audio system) power supply.
38	MUTE	O	Terminal to output SYSTEM MUTE signal.
39	BLINK LED	O	BLINKING LED terminal.
40	RD	O	Strobing terminal for SRAM lead.
41	WR	O	Strobing terminal for SRAM light.
42	CE	O	Terminal to enable SRAM chip.
43	ASTB	O	Latch terminal for SRAM light.
44 45	GND	–	GND terminal.
46 47 48	EVOL CLK EVOL DATA EVOL CE	O	Terminal to transfer serial data to eiectric volume.
49	PHONE INT	I	Terminal to input interruption signal from telephone.
50 ~ 53	GND	–	GND terminal.

Note: Only new microcomputers are described here.

Pin No.	Symbol	I/O	Function
54 55	MOTOR – MOTOR +	O	Terminal to control direction of motor revolution of flap.
56	REM MOTOR	O	Flap block battery ON/OFF control terminal. Flap power ON: H
57	DR SENC	I	Input terminal to detect opening and closing of cassette door. Pack in : "H" No pack : "L"
58	OPEN SENC	I	Terminal to detect opening of flap.
59	CLOSE SENC	I	Terminal to detect closing of flap.
60	RESET	I	Terminal to input reset signal.
61	DISP REQ	I	Terminal to input REQ signal from DCP microcomputer.
62	B/U	I	Input terminal for BACK UP detection.
63	A_{CC} IN	I	Input terminal for ACC ON/OFF detection. "H" at ACC ON. "L" at ACC OFF.
64	EJECT	I	Input terminal for EJECT key detection. The terminal turns "H" when key is pressed.
65	ILLUMI DET	I	Input terminal for ILLUMI detection.
66	DCP IN	I	Input terminal for DCP detection. The terminal turns "L" when DCP is detected.
67	FUNCTION	I	Input terminal for power (function) SW detection. The terminal turns "L" when FUNCTION SW is ON.
68	V_{DD}	–	Power supply voltage terminal (+5V).
69 70	X 2 X 1	–	System clock terminal.
71	V_{SS}	–	GND terminal.
72	NC	–	Not in use.
73	SELF CHECK	I	Terminal for SELF CHECK.
74	AV_{DD}	–	A/D power supply voltage terminal (+5V).
75	AVref 0	–	A/D reference voltage terminal (0V).
76 ~ 80	GND	–	GND terminal.

MOTOR +	MOTOR –	Direction of flap movement
H	H	Brake
H	L	In the direction of OPEN
L	H	In the direction of CLOSE
L	L	—

Differences (0952-3316-01)

Pin No.	Symbol	I/O	Function
50	BEEP	O	BUZZER output terminal which sends signal to turns the buzzer on.
51 ~ 58	NC	–	Not in use.
59	2105/2106	I	Terminal for input of PE-2105/PE-2106 selector signal. "H" in PE-2105 mode.
76	TEMP	O	The terminal judges high temperature when input voltage drops below 2.46V.

■ μPD78014GC-641-AB8 052-1301-10 Tuner Controller

Outward Form

64-pin plastic QFP

Terminal Description

No.	Symbol	I/O	Function
1	SD UP	O	Output when measuring a PLL setting IF count.
2	LPF CONT	O	PLL low-pass filter control terminal.
3	RDS MUTE	O	"H" is output for 1 second both at power (POWER & ACC)-on and AM to FM band switching.
4 ∫ 7	OUT 1 ∫ OUT 4	O	"H"/"L" is simply output by receiving an arbitrary command from the master.
8	NC	–	Not in use.
9	GND	–	GND terminal.
10 ∫ 17	SRAM AD 0 ∫ SRAM AD 7	I/O	SRAM control. Address & data line. Port commonly used for the lower 8-bit address and 8-bit data.
18 ∫ 20	SRAM A 8 ∫ SRAM A 10	O	SRAM control. Address line. Upper 3-bit address output only port.
21	NC	–	Not in use.
22	$\overline{\text{SRAM CE}}$	O	SRAM control chip enable. "L" output at any time while the power (POWER & ACC) is turned on.
23	S CW	I	Initial setting CW detection enable ("H")/disable ("L").
24	GND	–	GND terminal.
25	S RDS IC	I	Initial setting RSD-IC selection. PHILIPS ("H")/SANYO ("L"). Disabled when RDS ID signal is at "H" and enabled at "L".
26	S SD UP	I	Initial setting SD UP enable ("L")/disable ("H").
27	$\overline{\text{SRQ}}$	O	C-BUS communication SRQ output.
28	NC	–	Not in use.
29	REM	O	Remote signal output. "L" output at any time while the power (POWER & ACC) is turned on.
30	R MUTE	O	RADIO MUTE output. MUTE ON at "L". Turn on when changing the reception frequency.
31	$\overline{\text{SRAM RD}}$	O	SRAM control. Data read signal. "L" output when executing a data read instruction from the SRAM.
32	$\overline{\text{SRAM WR}}$	O	SRAM control. Data write signal. "L" output when executing a data write instruction to the SRAM.
33	AM SD	I	AM band. With-station detection signal input.
34	SRAM ASTB	O	SRAM control timing signal. Always output by effecting the memory expansion mode.
35	RESET	I	Microcomputer reset signal.
36	INITIAL AM SD	I	Initial setting AM band SD detection. Yes ("H")/No ("L") designation. "H" : Performs SD detection.
37	ACC CONT	I	ACC signal (Terminal interrupt). "H" at ACC ON. "L" at ACC OFF.
38	RDS IC CLK	I	RDS IC communication. Clock input. (Terminal interrupt)
39	IF MUTE	O	IF MUTE terminal.
40	VDD	–	Supply voltage terminal.
41 42	XTAL	I	Main clock oscillator (8.38 MHz) connection terminal.
43	GND	–	GND terminal.
44	NC	–	Not in use.
45	$\overline{\text{ST ID}}$	I	Stereo signal input. Stereo ("L")/monaural ("H").
46	A GND	–	A/D converter GND terminal.
47	S Meter	I	Electric field intensity (S meter) input (A/D conversion).
48	CW	I	CW (carrier) signal input (A/D conversion). Only when initial setting CW detection is enabled.
49	SD	I	Station enable detection signal input.
50	$\overline{\text{RSD ID}}$	I	RDS station recognition signal input. RDS station ("L").
51	$\overline{\text{SK ID}}$	I	ARI station SK signal input. SK-ON ("L").
52	$\overline{\text{DK ID}}$	I	ARI station DK signal input. DK-ON ("L").
53	RDS IC DATA	I	RDS IC communication data input. The port is read directly at clock interrupt time.
54	NC	–	Not in use. (+ 5V pullup or GND)
55	AVDD	–	A/D converter supply power.
56	A VREF	I	A/D converter reference voltage input.
57	PLL DI	I	PLL IC serial communication data input. Takes in the IF count data.
58	PLL DO	O	PLL IC serial communication data output. Sets the frequency divider, general purpose port data, etc.
59	PLL CLK	O	PLL IC serial communication clock output. Clock frequency: 524 kHz.
60	PLL CE	O	PLL IC serial communication chip enable output.
61	NC	–	Not in use.
62	C-BUS SBI	I	C-BUS communication data input.
63	C-BUS SBO	O	C-BUS communication data output.
64	C-BUS SCK	I	C-BUS communication clock input. The clock frequency depends on the master microcomputer.

■ADJUSTMENT:

●FM SECTION

Item	Procedure
S-meter	1.Connect the digital volt-meter to TP101. 2.Input the 98.1MHz/30dB(30%,400Hz)signal and adjust the level to 2.4V±0.1V by VR101.
Stop sensitivity	1.Input the 98.1MHz/28dB(30%,400Hz)signal. 2.Connect the GND to TP103. 3.Adjust VR102 so that the voltage of TP102 is high.(or seek up tuning stops)

●TAPE SECTION

Item	Procedure
Dolby level	1.Insert a Dolby level test tape(400Hz-200nWb/m),connect the milli-volt- meter to TP-L,TP-R and GND. 2.Adjust VR201 and VR202 to obtain an output of 388mV+1.5/-0.5dB at FWD and REV direction. (Dolby switch:OFF)

■PARTS LIST:

Note) Several different parts listed in the column are alternative parts. One of those parts is used in the set.

○SWITCH PWB

REF NO.	PART NO.	DESCRIPTION	QTY
C101,103	042-0397-00	CHIP-C 16V 1 μF TAN	2
C109	042-0406-01	CHIP-C 6.3V 47 μF TAN	1
C110	042-0416-02	CHIP-C 10V 10 μF TAN	1
IC101	051-6010-00	IC SED1526F0A	1
IC102	052-7006-01	IC μPD78058GC-038-3B9	1
IR101	060-0321-00	IR-RECEIVER	1

○MAIN PWB

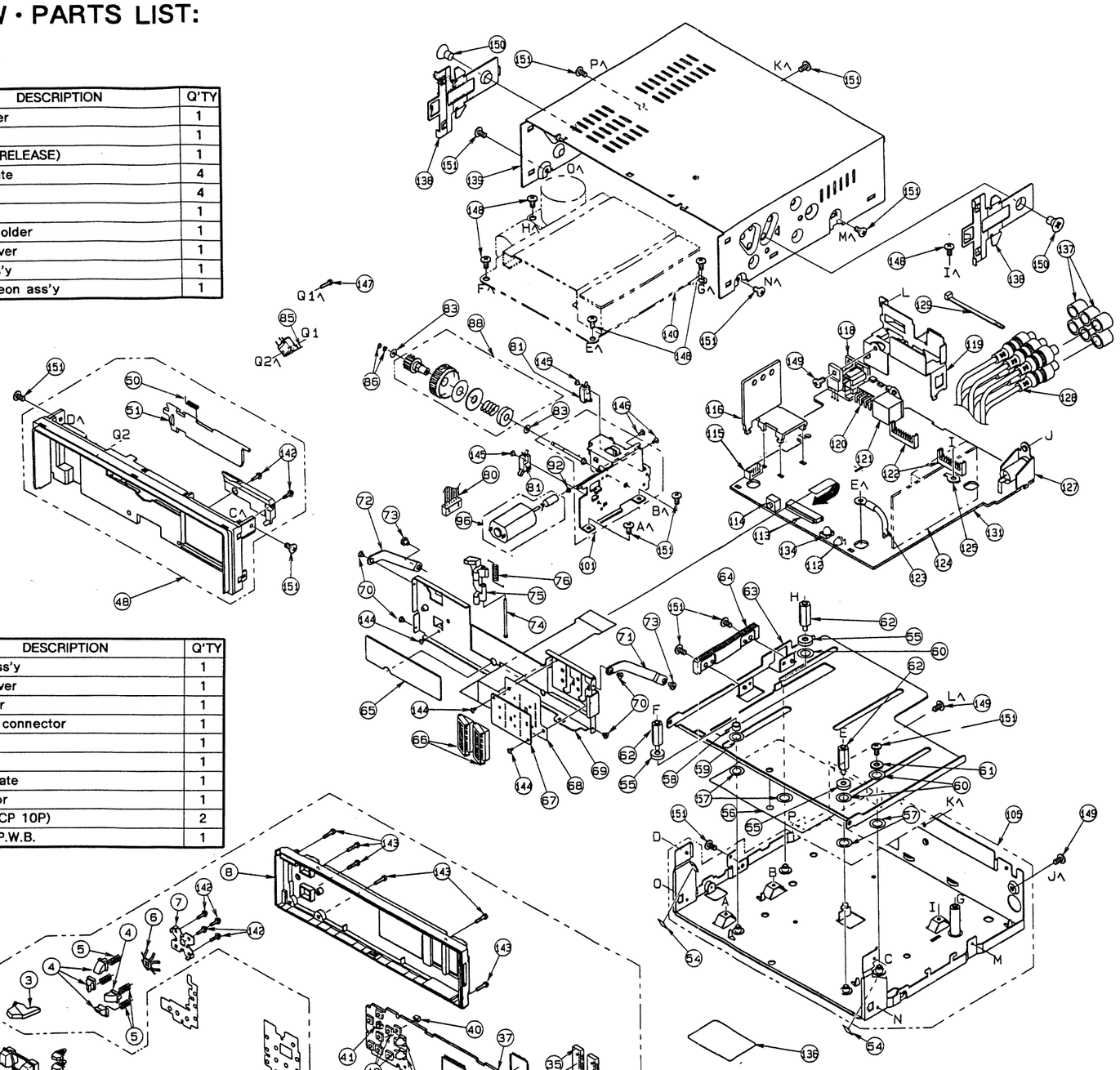
REF NO.	PART NO.	DESCRIPTION	QTY
D106,304,320	001-0330-00	DIODE 1SS119	3
D101	001-0366-00	DIODE LTZMR15	1
D301	001-0377-37	DIODE MA4068L	1
D103,201	001-0377-47	DIODE MA4091M	2
D319	001-0423-22	DIODE MA4075	1
D305,307,315	001-0466-00	DIODE S5688B	3
D104-108,202,306 312-314,317	001-0516-00	DIODE MA111	11
D102	001-0540-00	DIODE HVM187WK	1
D318	001-0659-00	LED SLP-181B-51	1
L102	010-2003-04	COIL#AM	1
L101	010-2230-00	COIL#0.15 μH	1
L103	010-2230-14	COIL#2.2 μH	1
L104,105,201	010-2230-26	COIL#22 μH	3
L106	010-2230-38	COIL#220 μH	1
VR102,201,202	012-5123-06	VARIABLE-R#10K	3
VR101	012-5123-15	VARIABLE-R#470K	1
CCT101	050-0122-50	COMPONENT CIRCUIT#10kΩ	1
IC304	051-0160-56	IC HD74LS07FPD	1
IC203,204	051-0350-55	IC NJM4558M	2
IC306	051-0869-05	IC MB3771PF(-G)	1
IC305	051-1014-05	IC TA7291F	1
IC106,303	051-1046-46	IC LC3517BML-12	2
IC105,302	051-1051-05	IC TC74HC573AF	2
IC103	051-1819-00	IC SAA6579T	1
IC307	051-3201-00	IC AN77L06	1
IC202	051-5004-00	IC CXA1946Q	1
IC201	051-5200-90	IC CXA1332M	1
IC101	051-6201-00	IC LC72146M	1
IC104	052-1301-10	IC μPD78014GC-641-AB8	1
IC301	052-3318-01	IC μPD78058GC-046-3B9	1
SUP101	060-0122-10	SURGE PROTECTOR#DSP-201	1
X301	060-0266-90	CERA-RESONATOR#4.19MHz	1
X103	060-0320-50	CERA-RESONATOR#8.38MHz	1
X101	061-1066-00	CRYSTAL#7.2MHz	1
X102	061-3013-00	CRYSTAL-OSC#4.33MHz	1
Q110,111,308	100-1162-00	TR 2SA1162	3
Q306	100-1298-00	TR 2SA1298	1
Q312	101-1237-00	TR 2SB1237	1
Q313	101-1243-00	TR 2SB1243	1
Q302,304,305,307 317	102-2712-00	TR 2SC2712	5
Q106,107	102-2712-51	TR 2SC2712G,L	2
Q104,201,202 204-207,321,322	103-1306-00	TR 2SD1306	9
Q203,315,323	103-1802-60	TR 2SD1802FA-RSTU	3
Q109	108-0241-50	FET 2SK241	1
Q105,320	125-0002-06	TR RN2406	2
Q101,102,103,108 112,301,316,324	125-2004-03	TR RN1403	8
Q303,318,319	125-2004-06	TR RN1406	3
R342	032-0108-00	FUSE-R 1/4W 1.8Ω	1
R355	114-1001-11	FILM-R 1W 10Ω	1

REF NO.	PART NO.	DESCRIPTION	QTY
X101	060-1009-00	CERA-RESONATOR#4.195MHz	1
C112,113	176-1011-00	CHIP-C 100pF	2
C111	176-2211-00	CHIP-C 220pF	1
C114,115	178-1032-78	CHIP-C 0.01 μF	2
C104-108	178-1042-78	CHIP-C 0.1 μF	5

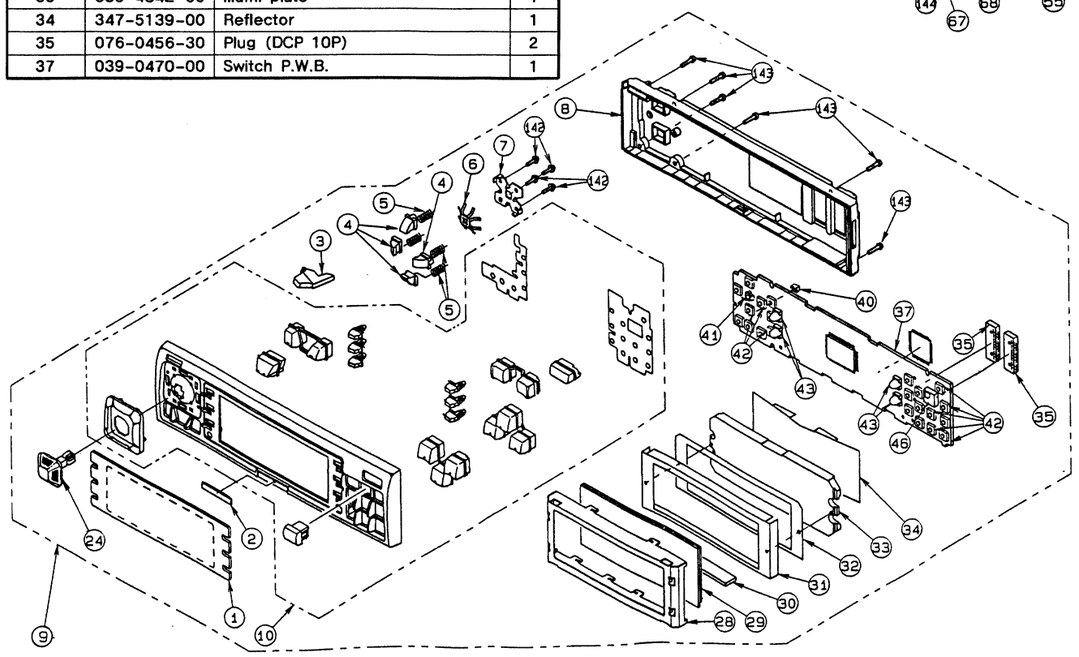
REF NO.	PART NO.	DESCRIPTION	QTY
C321	172-1041-11	POLY-C 0.1μF	1
C307	172-4731-11	POLY-C 0.047 μF	1
C121,347	172-6831-11	POLY-C 0.068 μF	2
C320,344	173-1021-11	POLY-C 1000pF	2
C202,203,229,230	173-2221-11	POLY-C 2200pF	4
C115-118,138,144 327,330,333,335	176-1011-00	CHIP-C 100pF	10
C127	176-1501-00	CHIP-C 15pF	1
C128	176-1801-00	CHIP-C 18pF	1
C139,146,148,150 279,326,328,334 336,337,340-343	176-2211-00	CHIP-C 220pF	14
C130	176-3311-00	CHIP-C 330pF	1
C134	176-4701-00	CHIP-C 47pF	1
C110	176-4711-00	CHIP-C 470pF	1
C132,277,278	176-5611-00	CHIP-C 560pF	3
C133	176-8201-00	CHIP-C 82pF	1
C304,313,314,329	178-1022-78	CHIP-C 1000pF	4
C135,136,142,152 153,236,274,324 338	178-1042-78	CHIP-C 0.1 μF	9
C120	178-1532-78	CHIP-C 0.015 μF	1
C237,275	178-1822-78	CHIP-C 1800pF	2
C101,102,111-113 125,140,141,145 149,151,305,316 332	178-2232-78	CHIP-C 0.022 μF	14
C241,271	178-2722-78	CHIP-C 2700pF	2
C123	178-3332-78	CHIP-C 0.033 μF	1
C114	178-4722-78	CHIP-C 4700pF	1
C315	178-4732-78	CHIP-C 0.047 μF	1
C126	042-0452-01	ELEC-C 10V 220 μF	1
C317	042-0458-06	ELEC-C 10V 22 μF	1
C312	042-0467-00	D-LAYER-C 5.5V 0.1F	1
C204,226	042-0537-00	ELEC-C 50V 0.56 μF	2
C124,263,310,322 323,346	183-1053-61	ELEC-C 50V 1 μF	6
C201,206,210,239 242,243,245,248 249,259,265,269 270,272,319,325	183-1063-31	ELEC-C 16V 10 μF	15
C228	183-1073-21	ELEC-C 10V 100 μF	1
C129	183-2253-61	ELEC-C 50V 2.2 μF	1
C137,345	183-2263-31	ELEC-C 16V 22 μF	2
C205,227	183-3343-61	ELEC-C 50V 0.33 μF	2
C122,207-209,225 244,247,250,267 268,311	183-4753-51	ELEC-C 35V 4.7 μF	11
C119,131	183-4763-11	ELEC-C 6.3V 47 μF	2
C231,262,306	183-4763-31	ELEC-C 16V 47 μF	3
C238,276	183-6843-62	ELEC-C 50V 0.68 μF	2
C318	184-4773-32	ELEC-C 16V 470 μF	1

■EXPLODED VIEW・PARTS LIST:

REF NO.	PART NO.	DESCRIPTION	Q'TY
1	373-0774-01	Dial cover	1
2	378-0134-00	Badge	1
3	382-7665-00	Button (RELEASE)	1
4	335-4846-00	Push plate	4
5	750-3172-00	Spring	4
6	750-3149-00	Spring	1
7	331-0587-20	Spring holder	1
8	335-4839-00	Rear cover	1
9	940-1732A	DCP ass'y	1
10	940-7704-00	Escutcheon ass'y	1



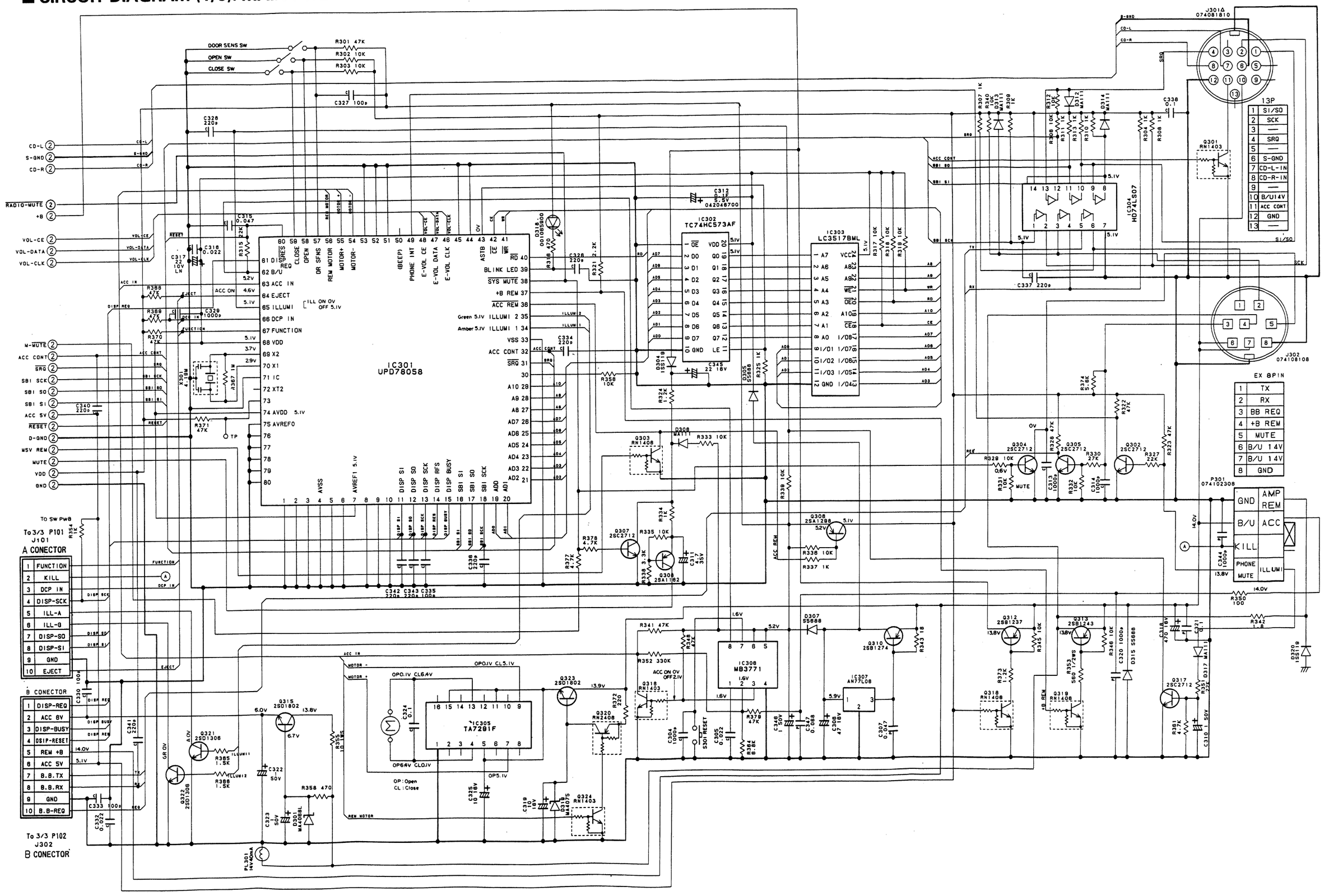
REF NO.	PART NO.	DESCRIPTION	Q'TY
24	947-0385-00	Knob ass'y	1
28	331-0580-00	LCD cover	1
29	379-1025-71	Indicator	1
30	345-7646-00	Rubber connector	1
31	347-5138-00	Film	1
32	347-5140-00	Film	1
33	335-4842-00	Illumi plate	1
34	347-5139-00	Reflector	1
35	076-0456-30	Plug (DCP 10P)	2
37	039-0470-00	Switch P.W.B.	1



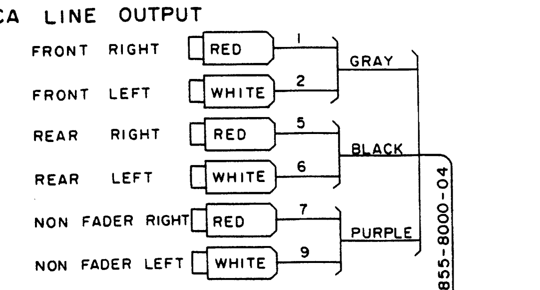
REF NO.	PART NO.	DESCRIPTION	Q'TY
40	013-7202-50	Switch (DCP)	1
41	013-6501-52	Switch (TACT)	1
42	013-6501-51	Switch	22
43	017-0438-55	Pilot lamp (4V-150mA)	4
46	060-0321-90	IR receiver (RS-21)	1
48	940-7708-00	Escutcheon ass'y (INNER)	1
50	750-2626-00	Spring	1
51	320-0442-23	Dustproof cover	1
54	347-5142-00	Film	2
55	340-4341-00	Spacer	3

REF NO.	PART NO.	DESCRIPTION	Q'TY
56	347-4082-00	Insulator	1
57	745-0640-00	Washer	4
58	340-4340-00	Roller	1
59	746-0887-00	Washer	1
60	746-0623-01	Washer	3
61	340-4348-00	Spacer	1
62	340-4339-00	Spacer	3
63	683-0062-00	Slide plate	1
64	613-0326-00	Gear (SLIDE)	1
65	291-0072-00	Sticker	1
66	074-1021-10	Outlet socket	2
67	039-0370-00	Connector P.W.B.	1
68	039-0371-00	FPC	1
69	331-0576-00	DCP holder	1
70	716-1715-00	Screw	4
71	331-0577-00	Lever (RIGHT)	1
72	331-0578-00	Lever (LEFT)	1
73	716-1724-00	Screw	2
74	341-1593-00	Shaft	1
75	335-4841-00	Hook	1
76	750-3177-00	Spring	1
80	854-3852-00	Extension lead	1
81	013-3757-00	Switch	2
82	621-0034-01	Thrust holder	1
83	745-0646-00	Washer	2
85	013-3880-00	Switch	1
86	743-1500-20	E-ring	2
88	960-4409-00	T load gear ass'y	1
96	948-0355-00	Motor ass'y	1
101	946-0054-00	Gear box ass'y	1
105	946-0053-00	Lower case ass'y	1
112	001-0659-00	Diode	1
113	074-1082-22	Outlet socket	1
114	013-3932-00	Switch (RESET)	1
115	076-0312-07	Plug	1
116	331-0639-00	IC holder	1
118	074-1022-01	Outlet socket (13P C-BUS)	1
119	331-0579-00	Connector holder	1
120	074-1023-08	Outlet socket (8P POWER)	1
121	074-1081-08	Outlet socket (8P N-BUS)	1
122	076-0509-09	Plug	2
123	840-0531-00	Bonding wire	1
124	880-2075B	FM, AM, LW tuner	1
125	073-0731-00	Terminal	1
127	092-9000-00	ANT recept	1
128	855-8000-04	RCA pin code (RCA 6CH)	1
129	335-0833-01	Lead holder	1
131	039-0471-00	Main P.W.B.	1
134	017-0433-50	Pilot lamp (14V 40mA)	1
136	286-8367-00	Setplate	1
137	345-3799-00	Rubber parts	6
138	750-2796-01	Spring (SIDE)	2
139	310-1564-00	Upper case	1
140	930-0738-80	Tape mech.	1
142	716-0778-00	Wave screw	6
143	716-1721-00	P-tight screw	6
144	738-1725-17	Precision screw	3
145	716-0670-01	Screw	2
146	716-0882-00	Motor screw	2
147	702-2008-81	Tap screw	1
148	716-0878-00	IT-screw	5
149	714-3006-80	Machine screw	3
150	714-5008-41	Machine screw	2
151	714-2604-80	Machine screw	13
152	716-1726-00	Screw	1

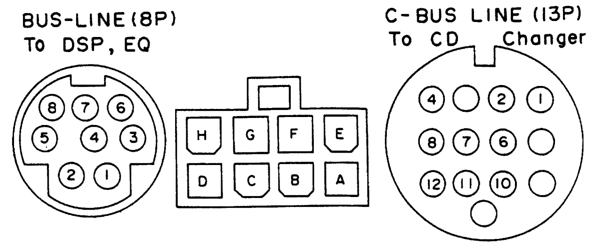
■ CIRCUIT DIAGRAM (1/3): MAIN PWB



■ PRINTED WIRING BOARD: MAIN PWB

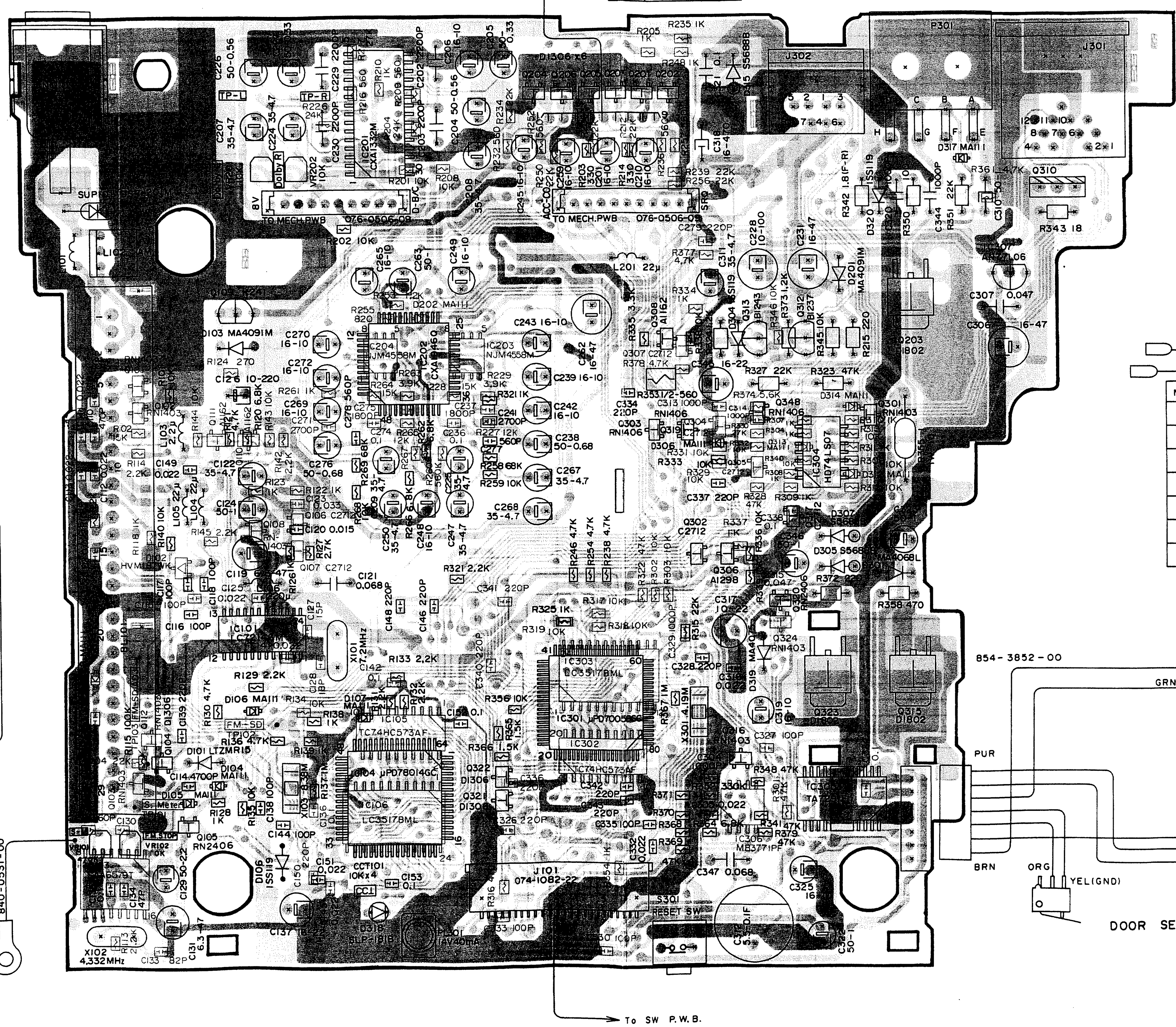


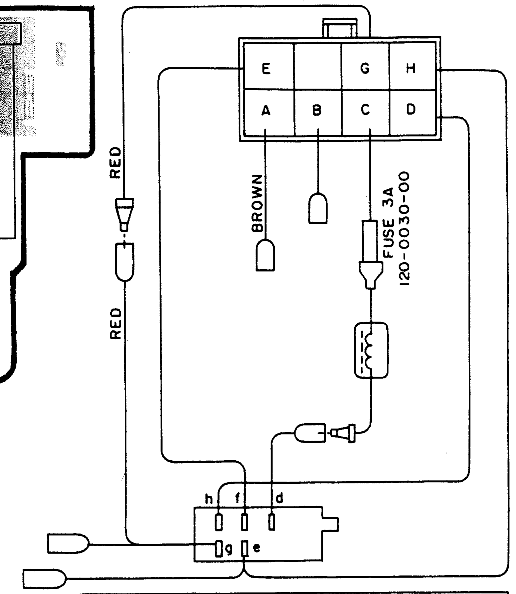
1	Tx (Date Out)
2	Rx (Date In)
3	Request
4	+B Remote
5	Mute
6	Back up +14V
7	Back up +14V
8	Ground
CASE	Ground case



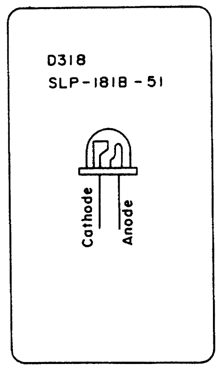
1	Serial data IN/OUT	8	Right ch. Input
2	Serial clock	10	Back up
4	Service request	11	Accessory control
6	Signal ground	12	Ground (C-Bus)
7	Left ch. Input	CASE	SHIELD

MAIN P.W.B.

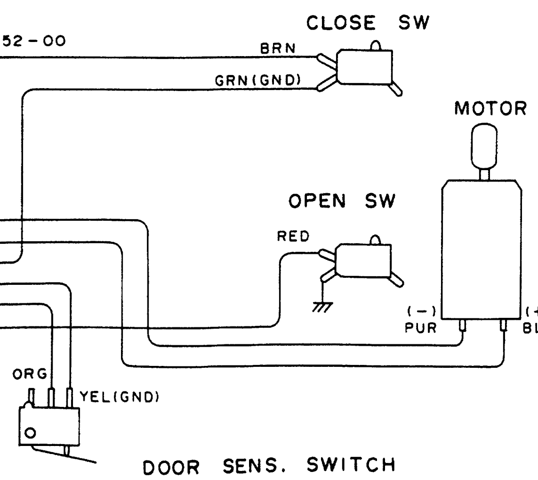




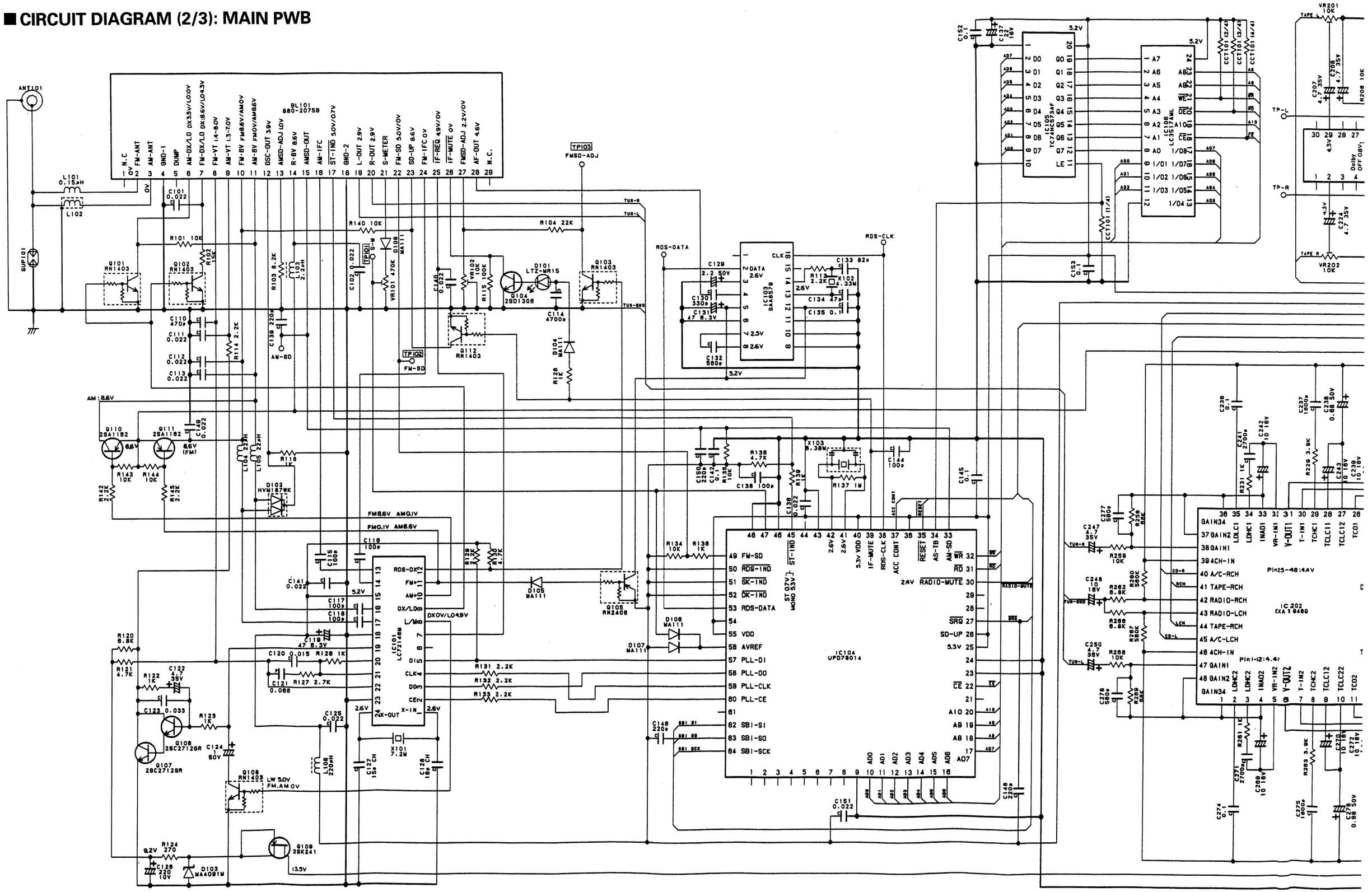
No.	Note	Color	ISO. PIN No.
A	PHONE MUTE	BROWN	—
B	STARTER KILL	BLUE / RED	—
C	BACK UP	YELLOW	d
D	GROUND	BLACK	h
E	ILLUMI.	ORANGE / WHITE	f
G	ACCESSORY CONT.	RED	g
H	AUTO ANT.	BLUE/WHITE	e

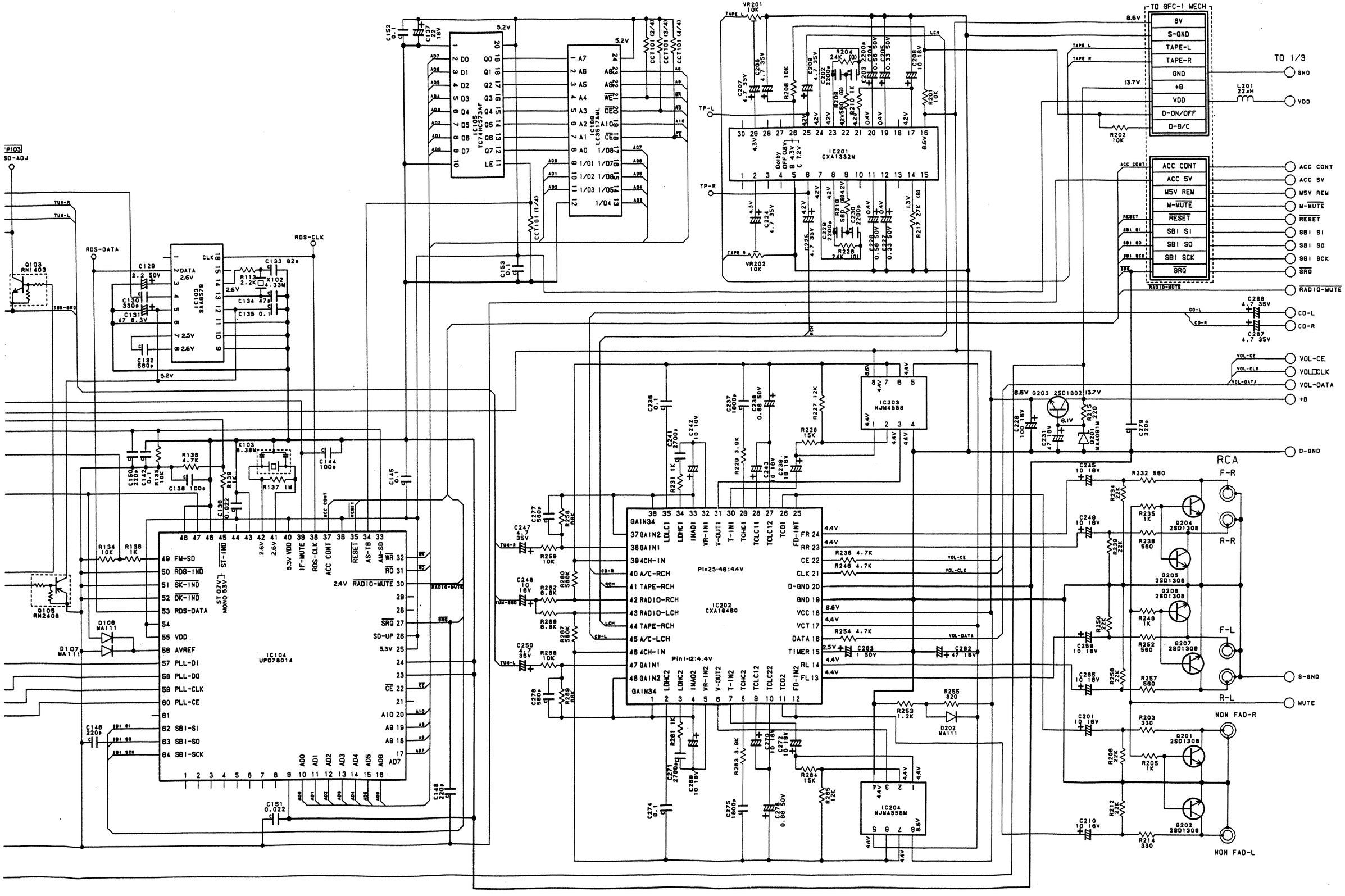


《SLOPE CONTROL》

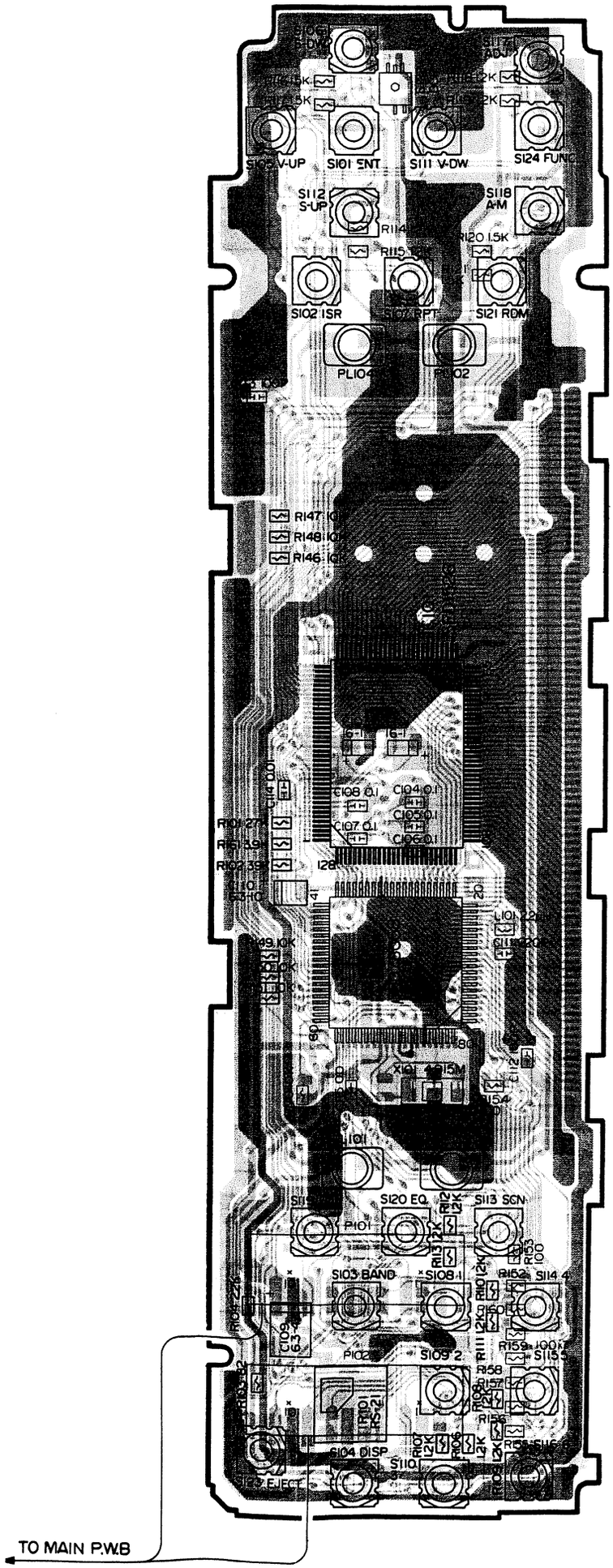


■ CIRCUIT DIAGRAM (2/3): MAIN PWB

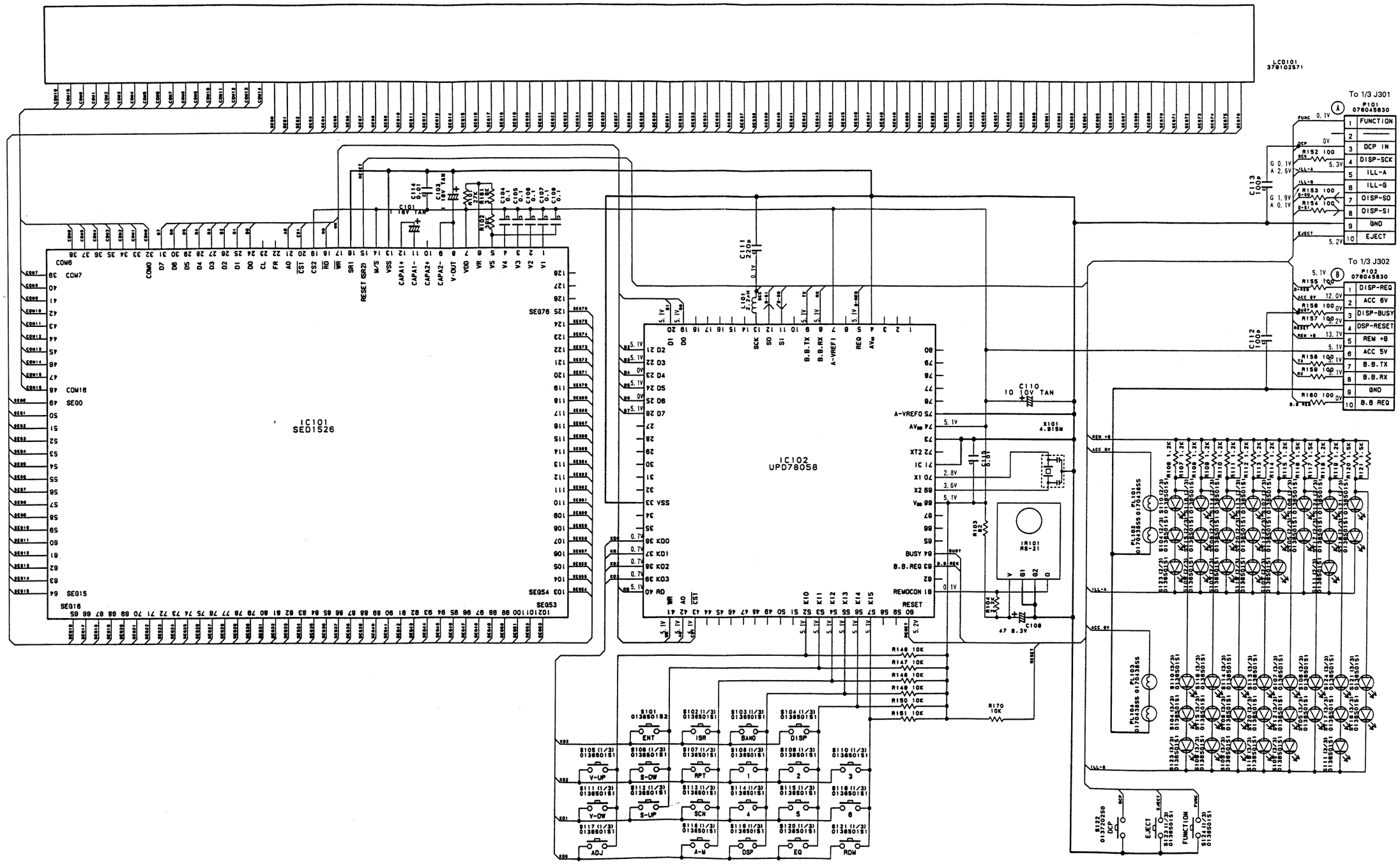



TO GFC-1 MECH
8V
S-GND
TAPE-L
TAPE-R
GND
+B
VDD
D-ON/OFF
D-B/C
TO 1/3
GND
VDD
L201 22uH
ACC CONT
ACC 5V
MSV REM
M-MUTE
RESET
SBI SI
SBI SO
SBI SCK
SRQ
RADIO-MUTE
CD-L
CD-R
VOL-CE
VOL-CLK
VOL-DATA
+B
D-GND
RCA
F-R
R-R
F-L
R-L
S-GND
MUTE
NON FAD-R
NON FAD-L
IC201 CXA1332M
IC202 CXA1946Q
IC203 NJM4558
IC204 NJM4558M
IC104 UPD78014
IC105 TC74HC573AF
IC108 LC35172ML
IC103 SAA6579
Q103 RN1403
Q105 RN2406
Q203 2SD1802
Q204 2SD1308
Q205 2SD1308
Q206 2SD1308
Q207 2SD1308
Q201 2SD1308
Q202 2SD1308
D108 MA111
D107 MA111
D201 MAZ0081M 220
D202 MA111
RDS-DATA
RDS-CLK
TUN-R
TUN-L
TUN-GND
TP-L
TP-R
VR201 10K
VR202 10K
X102 4.33M
X103 8.38M
RADIO-MUTE
ACC CONT
RESET
SBI SI
SBI SO
SBI SCK
SRQ
SD-UP
SD-ADJ
ST QTY
MONO 53V

■ PRINTED WIRING BOARD: SWITCH PWB

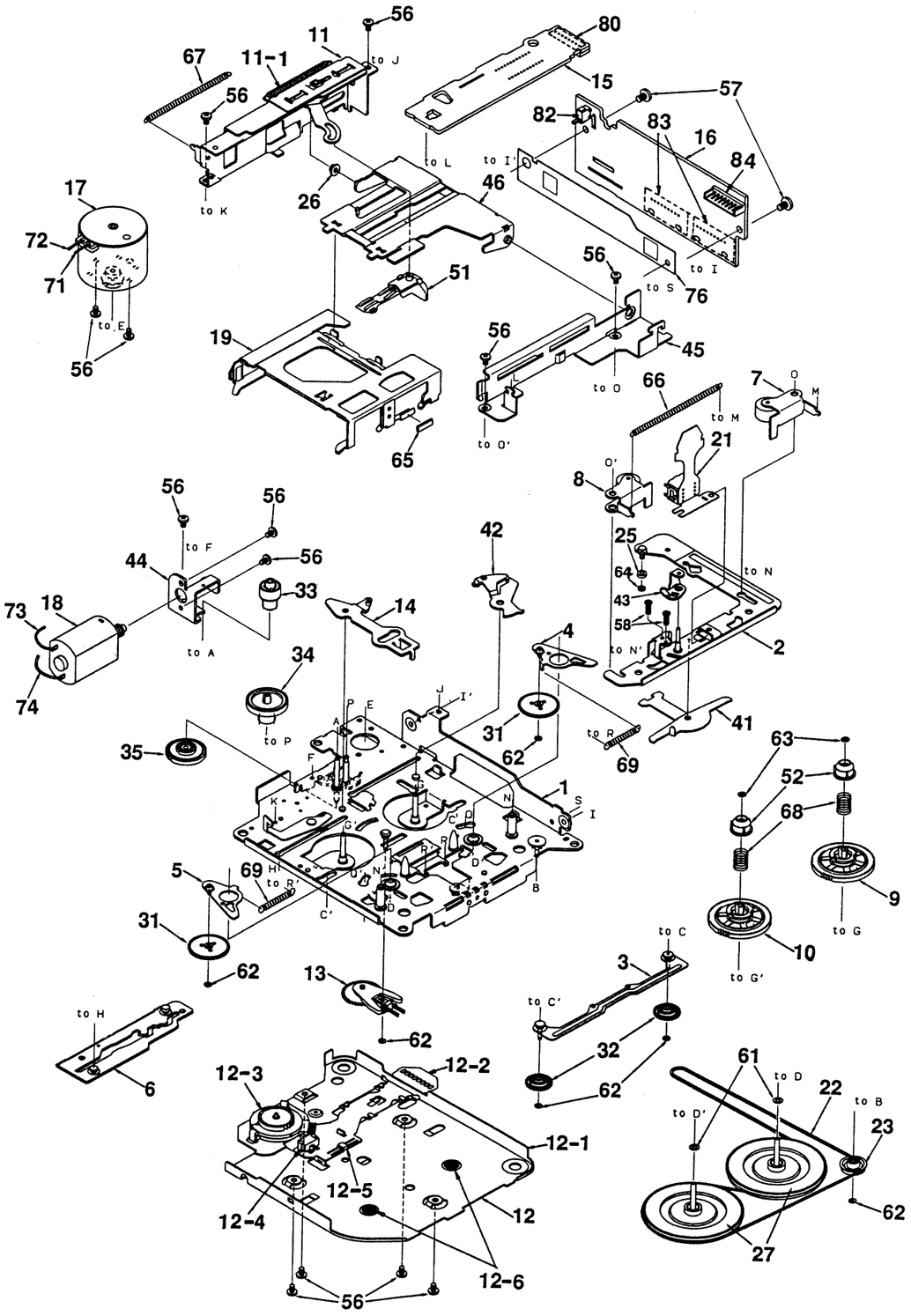


■ CIRCUIT DIAGRAM (3/3): SWITCH PWB



■EXPLODED VIEW · PARTS LIST:

◎Tape mechanism 930-0738-80(GFC-1)



NO	PART NO.	DESCRIPTION	QTY
1	960-4405-90	DECK PLATE-ASSY	1
2	960-4404-90	HEAD PLATE ASSY	1
3	960-4262-03	FF/REW-P-ASSY	1
4	960-4263-01	IDLER-P-ASSY F	1
5	960-4264-01	IDLER-P-ASSY R	1
6	960-4266-05	MODE PLATE-ASSY	1
7	960-4269-05	ROLLER ASSY F	1
8	960-4270-05	ROLLER ASSY R	1
9	960-4348-90	REEL ASSY F	1
10	960-4349-90	REEL ASSY R	1
11	960-4389-90	EJECT SUB-ASSY	1
11-1	750-3020-01	SW-PLATE SPRING	1
12	960-4338-01	BOTTOM SUB-ASSY	1
12-1	960-4295-02	BOTTOM P-ASSY	1
12-2	099-9926-01	FLEX PWB	1
12-3	013-3951-00	SWITCH•MODE	1
12-4	013-3953-00	SWITCH•Cr02	1
12-5	051-1776-01	IC NJL5801K-C	1
12-6	746-0767-00	WASHER	2
13	960-4282-99	DETECT-SUB-ASSY	1
14	960-4301-02	PLAY-L-ASSY GF	1
15	039-0053-00	SIDE PWB	1
16	039-0367-00	REAR-PWB	1
17	SMA-130-100	DC-MOTOR•MAIN	1
18	SMA-131-100	DC-MOTOR•POWER	1
19	960-4406-90	PACK GUIDE ASSY	1
21	011-0307-28	HEAD	1
22	602-0118-00	BELT	1
23	604-0046-00	TENSION PULLEY	1
25	610-0342-01	HEAD-P-ROLLER	1
26	610-0343-00	GUIDE A ROLLER	1
27	611-0091-02	FLYWHEEL	2
31	613-0285-02	IDLER GEAR	2

NO	PART NO.	DESCRIPTION	QTY
32	613-0286-02	FF/REW GEAR	2
33	613-0288-01	HERICAL GEAR	1
34	613-0289-01	GEAR A	1
35	613-0290-00	POWER GEAR	1
41	630-2718-00	CHANGE LINK	1
42	630-2598-04	EJECT LINK	1
43	630-2600-01	ADJUST LINK	1
44	630-2601-02	MOTER PLATE	1
45	630-2626-01	PWB FRAME	1
46	630-2642-01	GUIDE ARM	1
51	631-1992-01	PACK STOPPER	1
52	631-1993-01	SLIDE BUSH	2
56	716-0484-00	SCREW•M2X2.25 B	13
57	716-0761-01	PWB SCREW	2
58	716-0833-10	AZIMUTH SCREW	2
61	746-0624-00	WASHER	2
62	746-0724-00	WASHER	6
63	746-0761-00	WASHER	2
64	746-0762-00	WASHER	1
65	746-0883-00	CLEANING PAD	1
66	750-2946-02	PINCH SPRING	1
67	750-2947-02	EJECT-P-SPRING	1
68	750-2949-00	SLIDE SPRING	2
69	750-3148-00	IDLER P SPRING	2
71	800-4911-60	VINYL-COAT-WIRE•BLK	1
72	802-4911-60	VINYL-COAT-WIRE•RED	1
73	806-4914-60	VINYL-COAT-WIRE•BLU	1
74	809-4914-60	VINYL-COAT-WIRE•WHT	1
76	347-4080-00	INSULATOR	1
80	074-0881-08	OUTLET SOCKET•8P	1
82	013-3906-00	SWITCH	1
83	074-1012-09	OUTLET SOCKET•9P	2
84	076-0353-08	PLUG•8P	1

■PARTS LIST:

○Side PWB

REF NO.	PARTS NO.	DESCRIPTION	QTY
IC1	051-1546-10	IC BA3430S	1
C8,9	173-1231-10	Polyester-C 0.012μF	2
C1-4	175-3311-00	Chip-C 330pF	4
C12	175-5611-00	Chip-C 560pF	1
C6,7	042-0476-02	Electro-C 10V68μF	2
C11	183-1043-61	Electro-C 50V0.1μF	1
C14	183-2263-31	Electro-C 16V22μF	1
C13	183-4743-61	Electro-C 50V0.47μF	1
C10,15,16	183-4753-51	Electro-C 35V4.7μF	3
C5	183-4763-11	Electro-C 6.3V47μF	1

○REAR PWB

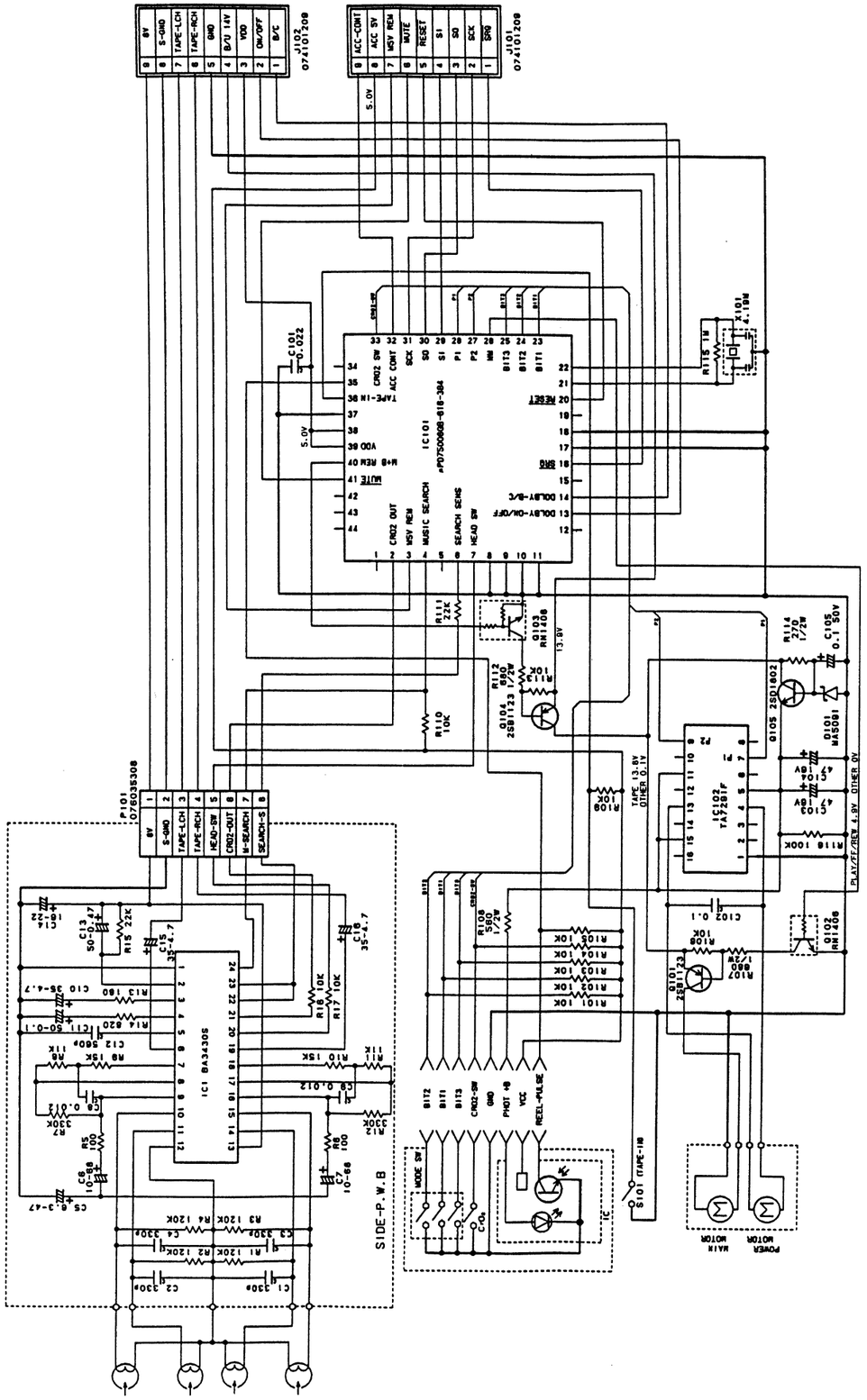
REF NO.	PARTS NO.	DESCRIPTION	QTY
D101	001-0595-17	Diode MA5091	1
IC102	051-1014-05	IC TA7291F	1
IC101	051-1647-02	IC μPD75008GB-616-3B4	1
X101	060-0266-00	Cera-resonator	1
Q101,104	101-1123-00	Transistor 2SB1123	2
Q105	103-1802-60	Transistor 2SD1802FA-R,S,T,U	1
Q102,103	125-2004-06	Transistor RN1406	2
C105	163-1063-30	Chip-C 50V0.1μF	1
C103,104	163-4763-30	Chip-C 16V47μF	2
C102	043-1601-10	Chip-C 0.1μF	1
C101	178-2232-78	Chip-C 0.022μF	1

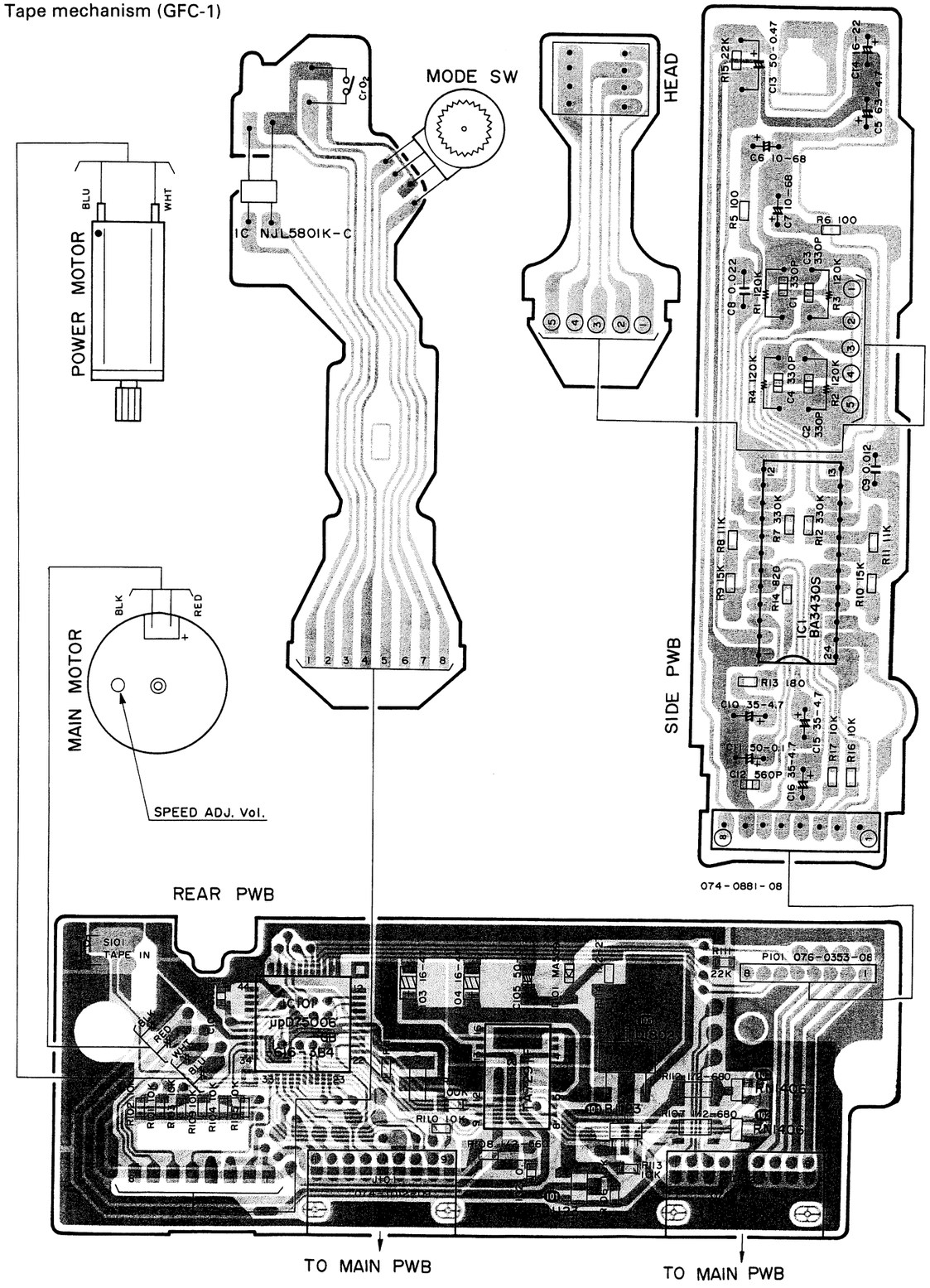
■ADJUSTMENT:

●TAPE MECHANISM SECTION

Item	Procedure	Instruments
Azimuth Adjustment	Make playback for the azimuth-tape (10kHz, −10VU), and turn each azimuth-adjusting screw to make each FWD & REV maximum. After adjustment, make adhesion with bond.	Milli-volt meter Azimuth-tape
Tape speed	Playback the test tape (3kHz, −10VU) and adjust the frequency counter value to be 3000Hz±45Hz with tape speed VR.	Freqency counter Wow flutter-tape (3kHz−10VU)

■CIRCUIT DIAGRAM:



■ PRINTED WIRING BOARD:

◎ Tape mechanism (GFC-1)